

UNCLASSIFIED

<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>								DATE <b>February 2000</b>	
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604865C PAC3 - EMD</b>				PROJECT <b>2257</b>	
COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
2257 Patriot	237345	179139	81016	0	0	0	0	TBD	TBD

**A. Mission Description and Budget Item Justification**

PATRIOT is a long range, mobile, field Army and Corps air defense system, using guided missiles to simultaneously engage and destroy multiple targets at varying ranges. The PATRIOT Advanced Capability Level 3 (PAC-3) Upgrade Program is the latest evolution of the phased materiel change improvement program to PATRIOT. The materiel changes will provide improved performance across the spectrum for system and threat intercept performance. In addition to modernization of the ground support equipment, funding provides for a new missile design that provides a high velocity, hit to kill, surface to air missile with the range, accuracy, and lethality necessary to effectively intercept and destroy tactical missiles with Nuclear Biological Chemical/High Explosive (NBC/HE) warheads and air breathing threats. The full capability will provide defense against TBM's, CM's, UAVs and other air breathing threats as part of a multilayered defense system. PATRIOT is pursuing integration of PATRIOT Battle Management Command, Control, Communications and Intelligence (BMC3I) with the Project Manager, Air Defense Command and Control Systems to take advantage of previous Army developments that can be incorporated into the PATRIOT program.

**FY 1999 Accomplishments:**

- 206162 Continued PAC-3 missile Engineering and Manufacturing Development (EMD) program, including the first intercept during Seeker Characterization Flight (SCF).
- 14024 Continued PAC-3 EMD target and test support.
- 12491 Continued operational test and evaluation and lethality efforts.
- 4668 Air Directed Surface to Air Missile (ADSAM) Testing (Cooperative Engagement Capability)

Total 237345

**FY 2000 Planned Program:**

- 161389 Continue PAC-3 missile Engineering and Manufacturing Development (EMD) program.
- 9712 Continue PAC-3 Target and Test Support.
- 8038 Continued operational test and evaluation efforts.

Total 179139

**FY 2001 Planned Program:**

- 65960 Complete PAC-3 missile Engineering and Manufacturing Development (EMD) program.

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<ul style="list-style-type: none"> <li>• 9632 Continue PAC-3 Target and Test Support</li> <li>• 5424 Continue Operational Test Support</li> <li>Total 81016</li> </ul>																																																			
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<p>Change Summary Explanation:</p> <p>Funding: FY 1999 (+55080):      Project decremented (-1409) for undistributed Congressional reductions.           Project decremented (-3511) for undistributed Defense-Wide reductions.           Project increased (+60000) via Congressional Reprogramming to meet program funding requirements and cost growth.</p> <p>   FY 2000 (+149998):      Congressional increase of (+75000) to meet program funding requirements.           Project decremented (-2) for undistributed reductions.           Congressional adjustment of (+75000) allocated from FY99 Emergency Supplemental.</p> <p>   FY 2001 (+41897):      Project increased (+44000) to meet program funding requirements and cost growth.           Project decremented (-2103) undistributed reductions.</p> <p>Schedule: PAC-3 Missile flight test program extended into FY 01. FUE delayed to FY02.</p>																																																			
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<p><b>D. Acquisition Strategy:</b> The design objective of the PATRIOT system is to provide a system capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The PATRIOT program consists of two interrelated acquisition programs – the PATRIOT Growth Program and the PAC-3 Missile Program. Growth Program modifications are grouped into configurations which are scheduled to be fielded in the same time frame. Configuration groupings are a convenience for managing block changes and are not a performance related grouping.</p>																																																			
<div style="display: flex; justify-content: space-between;"> <span>Project 2257</span> <span>Page 3 of 5 Pages</span> <span>Exhibit R-2 (PE 0604865C)</span> </div>																																																			

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However, incremental increases in performance is determined for each configuration in order to provide benchmarks for configuration testing and for the development of user doctrine and tactics.

<b>E. Schedule Profile</b>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Guidance Test Flight 1	2 <sup>nd</sup> Qtr						
PAC-3 Missile Low Rate Initial Production (LRIP)		1 <sup>st</sup> Qtr					
Configuration 3 CDT&E	3 <sup>rd</sup> Qtr						
Configuration 3 Initial Operational Test & Evaluation (IOT&E)			3-4 <sup>rd</sup> Qtr				
PDB-5 Software Release		3 <sup>rd</sup> Qtr					
PAC-3 FUE			4 <sup>th</sup> Qtr				
Milestone III				1 <sup>st</sup> Qtr			

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**BMDO RDT&E COST ANALYSIS (R-3)**

DATE

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**0604865C PAC3 - EMD**

PROJECT

**2257**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. PAC-3 Missile EMD	SS-CPIF	LMVS/TX	844018	78000	Dec 99	18578	Oct 00	0	940596	940596
b. PAC-3 Missile Integration	SS-CPIF	Raytheon/MA	135933	24000	Dec 99	13000	Nov 00	0	172933	172933
c. RDEC	MIPR	MRDEC/AL	57875	9728	Dec 99	6376	Nov 00	0	73979	73979
Subtotal Product Development:			1037826	111728		37954		0	1187508	1187508

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. SETA	C-CPAF	CAS/AL	33200	10140	Oct 99	4779	Oct 00	0	48119	48119
b. OGA/In-House	PO		56572	14200	Nov 99	4641	Nov 00	0	75413	75413
c. Engineering Support	SS-CPIF	Raytheon/MA	62939	11151		5685		0	79775	79775
Subtotal Support Costs:			152711	35491		15105		0	203307	203307

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. White Sands Missile Range	MIPR	WSMR/NM	71007	14170	Oct 99	12901	Oct 00	0	98078	98078
b. ADSAM			4668					0	4668	4668
c. Operational Test Support	MIPR		21951	8038		5424	Nov 00	0	35413	35413
d. Targets	MIPR	SMDC/AL	80956	9712		9632	Nov 00	0	100300	100300
e. Lethality	MIPR	SMDC/AL	37628					0	37628	37628
Subtotal Test and Evaluation:			216210	31920		27957		0	276087	276087

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a.											
b.											
c.											
d.											
e.											
f.											
Subtotal Management Services:											
Remark:											
Project Total Cost:				1406747	179139		81016		0	1666902	

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